

# **PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY**

**Phelps Dodge Magnet Wire Company  
4300 New Haven Avenue  
Fort Wayne, Indiana 46803**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 003-12801-00013	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

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## SECTION A

## SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a magnet wire coating operation.

Responsible Official: David C. Booher, Vice President  
Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803  
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, Indiana 46803  
Phone Number: (219) 421-5711  
SIC Code: 3357  
County Location: Allen  
County Status: Attainment for all criteria pollutants  
Source Status: Part 70 Permit Program  
Major Source, under PSD Rules;  
Major Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (a) One (1) SICME-NER wire coating machine consisting of a enameling oven (emission unit number 650), and wire cooler with a maximum capacity of 444 pounds magnet wire per hour, equipped with a thermal oxidizer for VOC control (not integral), exhausted through stack 407 through 414, 416, and 417.
- (b) One (1) SICME-VGR wire coating machine consisting of a enameling oven (emission unit number 310), and wire cooler with a maximum capacity of 366 pounds magnet wire per hour, equipped with a thermal oxidizer for VOC control (not integral), exhausted through stacks 405 and 406.
- (c) One (1) MAG-VEL8 wire enameling pilot oven, emission unit number 1071, with a maximum capacity of 244 pounds magnet wire per hour, with an internal catalytic oxidizer integral to the process, exhausted through stacks 1070 and 1071.
- (d) Emergency generator as follows: Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower: One (1) Cummins 395 HP natural gas emergency generator exhausting to stack 415. This is an insignificant activity with no specifically applicable requirements.

### A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## **SECTION B                      GENERAL CONSTRUCTION CONDITIONS**

### **B.1      Permit No Defense [IC 13]**

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2      Definitions [326 IAC 2-7-1]**

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

### **B.3      Effective Date of the Permit [IC13-15-5-3]**

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

### **B.4      Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]**

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### **B.5      Significant Source Modification [326 IAC 2-7-10.5(h)]**

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a)      The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed in conformance with the request for modification approval. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b)      If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c)      If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d)      The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

- (1)      If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.
- (2)      If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.

- (3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

## SECTION C GENERAL OPERATION CONDITIONS

### C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

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- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

### C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

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- (a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

### C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**C.4 Opacity [326 IAC 5-1]**

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**C.5 Operation of Equipment [326 IAC 2-7-6(6)]**

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Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

**Testing Requirements [326 IAC 2-7-6(1)]**

**C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).



- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

#### **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

##### **C.7 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

##### **C.8 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]**

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- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

##### **C.9 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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- (a) Whenever a condition in this permit requires the measurement of a temperature, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (  $\pm 2\%$  ) of full scale reading.

- (b) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

**C.10 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]  
[326 IAC 1-6]**

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:
    - (1) This condition;
    - (2) The Compliance Determination Requirements in Section D of this permit;
    - (3) The Compliance Monitoring Requirements in Section D of this permit;
    - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
    - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
      - (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
      - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
  - (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps may constitute a violation of the permit.
  - (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
    - (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

- (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
- (3) An automatic measurement was taken when the process was not operating.
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

C.11 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

C.12 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

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- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record

keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the

envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) SICME-NER wire enameling oven, emission unit number 650, with a maximum capacity of 444 pounds magnet wire per hour, equipped with a thermal oxidizer for VOC control (not integral), exhausted through stack 407 through 414, 416, and 417.
- (b) One (1) SICME-VGR wire enameling oven, emission unit number 310, with a maximum capacity of 366 pounds magnet wire per hour, equipped with a thermal oxidizer for VOC control (not integral), exhausted through stacks 405 and 406.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Volatile Organic Compounds [326 IAC 8-2-8]

- (a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), the volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to 1.7 pounds VOC per gallon of coating less water delivered to the applicator determined after use of the thermal oxidizer, including clean-up solvents, delivered to the applicator.
- (b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.

#### D.1.2 PSD Limit [326 IAC 6-2-2] [40 CFR 52.21]

These facilities shall emit less than a total of 39 tons of VOC including coatings, dilution solvents, and cleaning solvents per 12 consecutive month period. This limit is required to limit the potential to emit of VOC for the modification to less than 40 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

#### D.1.3 Hazardous Air Pollutants [326 IAC 2-4.1]

Each of these facilities shall emit less than 10 tons per year of any single HAP and 25 tons per year of any combination of HAP. Compliance with this limit makes 326 IAC 2-4.1 (New Source Toxics Control) not applicable.

#### D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

### Compliance Determination Requirements

#### D.1.5 Volatile Organic Compounds (VOC)

- (a) The thermal oxidizer associated with ovens 650 and 310 shall operate with an overall efficiency of not less than 98% at all times when the wire enameling oven is in operation.
- (b) The 98% overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8 and to ensure that 326 IAC 2-2 and 326 IAC 2-4.1 do not apply.

- (c) The external thermal oxidizer shall be operated at or above 1,366 degrees Fahrenheit or a temperature determined during compliance tests to maintain a minimum 98% overall efficiency.

#### D.1.6 Volatile Organic Compounds (VOC)

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Compliance with the VOC content limitations contained in Conditions D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

#### D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

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- (a) Within 60 days after achieving maximum rate, but no less than 180 days after initial start-up, the Permittee shall perform VOC testing on one of the ovens utilizing methods as approved by the Commissioner.
- (b) Additionally, if a coating is used with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,366EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 98% overall efficiency.

#### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.1.8 Monitoring

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- (a) Compliance with the 1,366EF minimum temperature will be monitored by computer collected data generated continuously.
- (b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour temperature records will be made available within five business days from request.
- (c) The temperatures will be reported based on an eight-hour average.
- (d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.
- (e) If a one-hour temperature is less than the established minimum temperature, this will be considered noncompliance.

## **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.1.9 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1.1, D.1.2, and D.1.3, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.1.1, D.1.2, and D.1.3.
  - (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The total VOC and HAP usage for each month; and
  - (4) The weight of VOCs and HAPs emitted for each compliance period.
- (b) To document compliance with Condition D.1.8, the Permittee shall maintain records of the computer collected data.
- (c) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

### **D.1.10 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.1.2 and D.1.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).



## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (c) One (1) MAG-VEL8 wire enameling pilot oven, emission unit number 1071, with a maximum capacity of 244 pounds magnet wire per hour, with an internal catalytic oxidizer integral to the process, exhausted through stacks 1070 and 1071.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Volatile Organic Compounds [326 IAC 8-2-8]

- (a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) the volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to 1.7 pounds VOC per gallon of coating less water delivered to the applicator determined after use of the catalytic oxidizer, including clean-up solvents, delivered to the applicator.
- (b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.

#### D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

### Compliance Determination Requirements

#### D.2.3 Volatile Organic Compounds (VOC)

- (a) The integral internal catalytic oxidizer associated with the pilot oven shall operate with an overall efficiency of not less than 95% at all times when the wire enameling oven is in operation.
- (b) The 95% overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8 and to ensure 326 IAC 2-2 and 326 IAC 2-4.1 do not apply.
- (c) The internal catalytic oxidizers shall be operated at or above 1,076 Fahrenheit or a temperature determined during compliance tests to maintain a minimum 95% overall efficiency.

#### D.2.4 Volatile Organic Compounds (VOC)

Compliance with the VOC content limitations contained in Conditions D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

#### D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within 60 days after achieving maximum rate, but no less than 180 days after initial start-up, the Permittee shall perform VOC testing utilizing other methods as approved by the Commissioner.

- (b) Additionally, if a coating is used with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,076EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 95% overall efficiency.

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

##### **D.2.6 Monitoring**

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- (a) Compliance with the 1,076EF minimum temperature will be monitored by computer collected data generated continuously.
- (b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour temperature records will be made available within five business days from request.
- (c) The temperatures will be reported based on an eight-hour average.
- (d) The oxidizers shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.
- (e) If a one-hour temperature is less than the established minimum temperature, this will be considered noncompliance.

##### **D.2.7 Catalyst Replacement**

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The catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizer is achieving the required overall efficiency. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions.

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **D.2.8 Record Keeping Requirements**

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- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records of material safety data sheets (MSDS) to verify the VOC content of each coating material and solvent used.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain records of the computer collected data.
- (c) To document compliance with D.2.7, the Permittee shall maintain a log of the replacement dates of the catalyst.
- (d) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 SOURCE MODIFICATION  
CERTIFICATION**

Source Name: Phelps Dodge Magnet Wire Company  
Source Address: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, IN 46803  
Source Modification No.: 003-12801-00013

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.**

Please check what document is being certified:

- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Phelps Dodge Magnet Wire Company  
Source Address: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, IN 46803  
Part 70 Permit No.: 003-12801-00013  
Facility: Emission Units 310 and 650  
Parameter: VOC emissions  
Limit: 39 tons per year

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Phelps Dodge Magnet Wire Company  
Source Address: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, IN 46803  
Part 70 Permit No.: 003-12801-00013  
Facility: Emission Units 650  
Parameter: Single HAP  
Limit: 10 tons per year

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Phelps Dodge Magnet Wire Company  
Source Address: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, IN 46803  
Part 70 Permit No.: 003-12801-00013  
Facility: Emission Units 650  
Parameter: Combination of HAP  
Limit: 25 tons per year

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Phelps Dodge Magnet Wire Company  
Source Address: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, IN 46803  
Part 70 Permit No.: 003-12801-00013  
Facility: Emission Units 310  
Parameter: Single HAP  
Limit: 10 tons per year

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Phelps Dodge Magnet Wire Company  
Source Address: 4300 New Haven Avenue, Fort Wayne, IN 46803  
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, IN 46803  
Part 70 Permit No.: 003-12801-00013  
Facility: Emission Units 310  
Parameter: Combination of HAP  
Limit: 25 tons per year

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.



## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Part 70 Significant Source Modification.**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Phelps Dodge Magnet Wire Company</b>
<b>Source Location:</b>	<b>4300 New Haven Avenue, Fort Wayne, Indiana 46803</b>
<b>County:</b>	<b>Allen</b>
<b>SIC Code:</b>	<b>3357</b>
<b>Significant Source Modification No.:</b>	<b>003-12801-00013</b>
<b>Permit Reviewer:</b>	<b>ERG/RM</b>

The Office of Air Quality (OAQ) has reviewed a modification application from Phelps Dodge Magnet Wire Company relating to the construction and operation of the following emission units and pollution control devices:

- (a) One (1) SICME-NER wire coating machine consisting of a enameling oven (emission unit number 650), and wire cooler with a maximum capacity of 444 pounds magnet wire per hour, equipped with a thermal oxidizer for VOC control (not integral), exhausted through stack 407 through 414, 416, and 417.
- (b) One (1) SICME-VGR wire coating machine consisting of a enameling oven (emission unit number 310), and wire cooler with a maximum capacity of 366 pounds magnet wire per hour, equipped with a thermal oxidizer for VOC control (not integral), exhausted through stacks 405 and 406.
- (c) One (1) MAG-VEL8 wire enameling pilot oven, emission unit number 1071, with a maximum capacity of 244 pounds magnet wire per hour, with an internal catalytic oxidizer integral to the process, exhausted through stacks 1070 and 1071.

#### **History**

On October 6, 2000, Phelps Dodge submitted an application to the OAQ requesting approval to add the above equipment to their existing plant. An application for a Part 70 permit (T 003-6925-00013) for the existing source was received on October 15, 1996, and is currently being reviewed by IDEM, OAQ.

#### **Air Pollution Control Justification as an Integral Part of the Process**

The company has submitted the following justification such that the VOC internal catalytic oxidizer for the MAG-VEL 8 oven be considered as an integral part of the wire coating process:

The VOCs will be oxidized using only the process heat supplied by the curing ovens.

IDEM, OAQ has evaluated the justifications and agreed that the catalytic oxidation systems will be considered as an integral part of the wire coating process. Therefore, the permitting level will be determined using the potential to emit after the internal catalytic VOC oxidation system. Operating conditions in the proposed permit will specify that this catalytic VOC oxidation system shall operate at all times when the wire coating process is in operation. This is the same justification and evaluation used for other integral oxidizers in previous permits.

The thermal oxidizers used on the SICMI-NER and SICME-VGR are not considered integral.

### Enforcement Issue

There are no enforcement actions pending.

### Insignificant Activities

The source modification also consists of the following insignificant activities, as defined in 326 IAC 2-7-1 (21):

Emergency generator as follows: Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower: One (1) Cummins 395 HP natural gas emergency generator exhausting to stack 415. This is an insignificant activity with no specifically applicable requirements.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
407	SICME-NER oven	89	0.44	1,153	572
408	SICME-NER oven	89	0.44	1,153	572
409	SICME-NER oven	89	0.44	1,153	572
410	SICME-NER oven	89	0.44	1,153	572
411	SICME-NER wire cooler	89	1.01	3,500	120
412	SICME-NER wire cooler	89	1.01	3,500	120
413	SICME-NER wire cooler	89	1.01	3,500	120
414	SICME-NER wire cooler	89	1.01	3,500	120
416	SICME-NER wire cooler	89	0.20	2,100	120
417	SICME-NER wire cooler	89	0.20	2,100	120
405	SICME-VGR wire cooler	79	2.06	10,000	120
406	SICME-VGR oven	79	1.31	2,600	806
1070	MAG-VEL 8 wire cooler	27	0.75	Not available	200
1071	MAG-VEL 9 oven	27	0.37	470	850
415	Emergency generator	25	0.75	210	300-400

### Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 6, 2000.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations (10 pages).

## Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. (The emissions reflected in the table below are after the integral catalytic oxidizer for the MAG-VEL 8 oven.)

Pollutant	Potential To Emit (tons/year)
PM	0.04
PM-10	0.04
SO <sub>2</sub>	0
VOC	710.4
CO	0.4
NO <sub>x</sub>	0.48

HAP's	Potential To Emit (tons/year)
Xylene	116.67
Cumene	2.93
Phenol	227.69
Cresols/Cresylic Acid	130.05
Benzene	1.012E-05
Dichlorobenzene	5.782E-06
Formaldehyde	0.0003614
Hexane	0.008672
Toluene	1.638E-05
Lead	2.409E-06
Cadmium	5.3E-06
Chromium	6.74E-06
Manganese	1.831E-06
Nickel	1.012E-05
Total HAPs (ton/yr)	477.35

## Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5 (f)(4)(D), a modification with a potential to emit greater than twenty-five(25) tons per year of volatile organic compounds (VOCs) that require the use of air pollution control equipment to comply with the applicable provisions of 326 IAC 8. Because the source's Part 70 Operating Permit has not yet been issued, this approval will allow the source to construct and operate pursuant to 326 IAC 2-7-10.5(h).

### County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Allen County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	less than 250
PM-10	less than 250
SO <sub>2</sub>	less than 250
VOC	greater than 250
CO	less than 250
NO <sub>x</sub>	less than 250

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Technical Support document for the Minor Source Modification 003-11803-00013.

### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs*
SICME - NER	0	0	0	<39	0	0	7.09
SICME - VGR	0	0	0	<39	0	0	2.45
MAG - VEL 8	0	0	0	0.85	0	0	0.62
Emergency Generator	0.01	0.04	0	0.03	0.40	0.48	<0.01
Total	0.04	0.04	0	<40	0.40	0.48	10.17
PSD Level	25	15	40	40	100	40	---

The VOC emissions from the SICME-NER and SICME-VGR ovens will be limited to less than 39 tons per year. The total potential VOC emissions from the MAG-VEL8 oven and the emergency generator are less than 1 ton per year. Therefore, this modification to an existing major stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification. 40 CFR 60, Subpart TT, Standards of Performance for Metal Coil Surface Coating and 40 CFR 60, Subpart VVV, Standards of Performance for Polymeric Coating of Supporting Substrates Facilities, do not apply because magnet wire coating does not fall within the definition of metal coil surface coating or within the definition of polymeric coating of supporting substrates.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

### State Rule Applicability - Individual Facilities

#### 326 IAC 2-2 Prevention of Significant Deterioration (PSD)

This source is major under the PSD rules. However, this modification is not a major modification because the emission increase is less than the PSD significance levels. The VOC emissions from the SICME-NER and SICME-VGR ovens will be limited to less than 39 tons per year. The total potential VOC emissions from MAG-VEL8 oven and the emergency generator is less than one. Therefore, the total VOC emission increase for this modification is less than 40 tons per year.

#### 326 IAC 2-4.1 New Source Toxics Control

The wire coating ovens 310 and 650 are not subject to 326 IAC 2-4.1 because they are limited to no emissions greater than 10 tons per year of a single HAP or greater than 25 tons per year of a combination of HAPs. The use of the oxidizers ensure that 326 IAC 2-4.1 does not apply. The wire coating oven 1071 and the emergency generator are not subject to 326 IAC 2-4.1 because emissions are less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs.

#### 326 IAC 8-2-8 Magnet Wire Coating Operations

Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), the volatile organic compound (VOC) content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to 1.7 pounds VOC per gallon of coating less water delivered to the applicator.

This limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.

The thermal oxidizers associated with the SICME-NER (unit 650) and SICME-VGR (unit 310) must operate with an overall efficiency of not less than 98% at all times when the wire enameling ovens are in operation. This overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8.

The internal catalytic oxidizer integral to the MAG-VEL8 (unit 1071) must operate with an overall efficiency of not less than 95% at all times when the wire enameling oven is in operation. This overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8.

### **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The SICME-NER and SICME-VGR ovens have applicable compliance monitoring conditions as specified below:
  - (a) Compliance with the 1366EF minimum temperature will be monitored by computer collected data generated continuously.
  - (b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour temperature records will be made available within five business days from request.
  - (c) The temperatures will be reported based on an eight-hour average.
  - (d) SICME-NER and SICME-VGR shall operate with a five (5) degree buffer such that if the eight-hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.
  - (e) If a one-hour temperature is less than the established minimum temperature, this will be considered noncompliance.

These monitoring conditions are necessary because the oxidizers must operate properly to ensure compliance with the requirements of 326 IAC 8-2-8 (magnet wire coating operations) and 326 IAC 2-7 (Part 70).

2. The MAG-VEL8 has applicable monitoring conditions as specified below:
  - (a) Compliance with the 1076EF minimum temperature will be monitoring by computer collected data generated continuously.
  - (b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour temperature records will be made available within five business days from request.
  - (c) The temperatures will be reported based on an eight-hour average.
  - (d) The MAG-VEL8 shall operate with a five (5) degree buffer such that if the eight-hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature feel below the actual minimum temperature.
  - (e) If during one-hour the temperature is less than the established minimum temperature, this will be considered noncompliance.

These monitoring conditions are necessary because the oxidizers must operate properly to ensure compliance with the requirements of 326 IAC 8-2-8 (magnet wire coating operations) and 326 IAC 2-7 (Part 70).

## **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 003-12801-00013.

# Appendix A: Emission Calculations

## Uncontrolled Emission Totals

Company Name: Phleps Dodge Magnet Wire Company  
 Address City IN Zip: 4300 New Haven Avenue  
 Permit Number: 003-12801-00013  
 Plt ID: 003-00013  
 Reviewer: ERG/RM  
 Date: 10-24-00

### Uncontrolled Emissions (ton/yr)

Pollutant	Unit 650 Emissions (ton/yr)	Unit 310 Emissions (ton/yr)	Unit 1071 Emissions (ton/yr)	Emergency Generator Emissions (ton/yr)	Total Emissions (ton/yr)
PM	0	0	0	0.01	0.01
PM10	0	0	0	0.04	0.04
SO2	0	0	0	0	0
NOx	0	0	0	0.48	0.48
VOC	515.52	194	0.85	0.03	710.4
CO	0	0	0	0.4	0.4
Xylene	113.13	3.54	0	0	116.67
Cumene	1.51	1.42	0	0	2.93
Phenol	139.53	87.85	0.31	0	227.69
Cresols/Cresylic Acid	100.46	29.28	0.31	0	130.05
Benzene	0	0	0	1.012E-05	1.012E-05
Dichlorobenzene	0	0	0	5.782E-06	5.782E-06
Formaldehyde	0	0	0	0.0003614	0.0003614
Hexane	0	0	0	0.008672	0.008672
Toluene	0	0	0	1.638E-05	1.638E-05
Lead	0	0	0	2.409E-06	2.409E-06
Cadmium	0	0	0	5.3E-06	5.3E-06
Chromium	0	0	0	6.745E-06	6.745E-06
Manganese	0	0	0	1.831E-06	1.831E-06
Nickel	0	0	0	1.012E-05	1.012E-05
Total HAPs (ton/yr)					477.35

Note: Unit 1071 has an integral catalytic converter. Therefore, uncontrolled and controlled emissions are equal.



# Appendix A: Emission Calculations

## Controlled Emission Totals

Company Name: Phleps Dodge Magnet Wire Company  
Address City IN Zip: 4300 New Haven Avenue  
Permit Number: 003-12801-00013  
Plt ID: 003-00013  
Reviewer: ERG/RM  
Date: 10-24-00

### Controlled Emissions (ton/yr)

Pollutant	Unit 650 Emissions (ton/yr)	Unit 310 Emissions (ton/yr)	Unit 1071 Emissions (ton/yr)	Emergency Generator Emissions (ton/yr)	Total Emissions (ton/yr)
PM	0	0	0	0.01	0.01
PM10	0	0	0	0.04	0.04
SO2	0	0	0	0	0
NOx	0	0	0	0.48	0.48
VOC	10.31	3.88	0.85	0.03	15.07
CO	0	0	0	0.4	0.4
Xylene	2.26	0.07	0	0	2.33
Cumene	0.03	0.03	0	0	0.06
Phenol	2.79	1.76	0.31	0	4.86
Cresols/Cresylic Acid	2.01	0.59	0.31	0	2.91
Benzene	0	0	0	1.01E-05	1.01E-05
Dichlorobenzene	0	0	0	5.78E-06	5.78E-06
Formaldehyde	0	0	0	3.61E-04	3.61E-04
Hexane	0	0	0	8.67E-03	8.67E-03
Toluene	0	0	0	1.64E-05	1.64E-05
Lead	0	0	0	2.41E-06	2.41E-06
Cadmium	0	0	0	5.30E-06	5.30E-06
Chromium	0	0	0	6.75E-06	6.75E-06
Manganese	0	0	0	1.83E-06	1.83E-06
Nickel	0	0	0	1.01E-05	1.01E-05
Total HAPs (ton/yr)					10.17

Uncontrolled Potential Emissions																	
Material	Density (Lb/GAL)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	
Polyimide Enamel 97-68-099	8.51	89.00%	0.00%	89.00%	0.00%	10.94%	0.035	444	7.57	7.57	117.70	2824.76	515.52	0.00	69.23	100.00%	
Formvar Enamel 97-64-635	8.2	90.00%	0.00%	90.00%	0.00%	12.30%	0.035	444	7.38	7.38	114.69	2752.44	502.32	0.00	60.00	100.00%	
Polyester Enamel 97-72-607	8.8	85.00%	0.00%	85.00%	0.00%	18.30%	0.035	444	7.48	7.48	116.24	2789.74	509.13	0.00	40.87	100.00%	
Amide-Imide Enamel 97-61-539	8.51	80.00%	0.00%	80.00%	0.00%	15.30%	0.035	444	6.81	6.81	105.80	2539.11	463.39	0.00	44.50	100.00%	
Worst Case Uncontrolled Potential to Emit:											117.70	2824.76	515.52	0.00			
Controlled Potential Emissions																	
							Material (As Applied)		Applicant listed VOC Control Efficiency	Controlled VOC lbs per hour	Controlled VOC lbs per day	Controlled VOC tons per year					
							Polyimide Enamel 97-68-099		98.00%	2.35	56.50	10.31					
							Formvar Enamel 97-64-635		98.00%	2.29	55.05	10.05					
							Polyester Enamel 97-72-607		98.00%	2.32	55.79	10.18					
							Amide-Imide Enamel 97-61-539		98.00%	2.12	50.78	9.27					
Worst Case Controlled Potential To Emit:										2.35	56.50	10.31					

Methodology:

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1 - Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

Potential VOC pounds per hour = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC pounds per day = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* 24 hr/day

Potential VOC tons per year = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* 8760 hr/yr \* (1 ton/2000 lb)

Particulate Potential Tons per Year = (units/hr) \* (gal/unit) \* (lbs/gal) \* (1 - Weight % Volatiles) \* (1 - Transfer Efficiency) \* (8760 hr/yr) \* (1 ton/2000 lb)

Pounds VOC per Gallon of solids = (Density (lb/gal) \* Weight % organics) / (Volume % Solids) \* Transfer Efficiency

Controlled emission rate = worst case uncontrolled emission rate \* (1 - control efficiency)

VOC And Particulate  
 From Surface Coating Operations  
 Emission Unit 310  
 Company Name: Phelps Dodge Magnet Wire Company  
 Address City IN Zip: 4300 New Haven Avenue  
 Permit Number: 003-12801-00013  
 Plt ID: 003-00013  
 Reviewer: ERG/RM  
 Date: 10-24-00

Uncontrolled Potential Emissions																	
Material	Density (Lb/GAL)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat (gal/unit)	Maximum (units/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	
Formvar C 97-64-360	8.48	79.50%	0.00%	79.50%	0.00%	32.00%	0.018	366	6.74	6.74	44.29	1063.02	194.00	0.00	21.07	100.00%	
Worst Case Uncontrolled Potential to Emit:											44.29	1063.02	194.00	0.00			
Controlled Potential Emissions																	
							Material		Applicant listed VOC Control Efficiency	Controlled VOC lbs per hour	Controlled VOC lbs per day	Controlled VOC tons per year					
							Formvar C 97-64-360		98.00%	0.89	21.26	3.88					
Worst Case Controlled Potential To Emit:											0.89	21.26	3.88				

## Methodology:

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1 - Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

Potential VOC pounds per hour = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC pounds per day = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* 24 hr/day

Potential VOC tons per year = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* 8760 hr/yr \* (1 ton/2000 lb)

Particulate Potential Tons per Year = (units/hr) \* (gal/unit) \* (lbs/gal) \* (1 - Weight % Volatiles) \* (1 - Transfer Efficiency) \* (8760 hr/yr) \* (1 ton/2000 lb)

Pounds VOC per Gallon of solids = (Density (lb/gal) \* Weight % organics) / (Volume % Solids) \* Transfer Efficiency

Controlled emission rate = worst case uncontrolled emission rate \* (1 - control efficiency)

VOC And Particulate  
From Surface Coating Operations  
Emission Unit 1071  
Company Name: Phelps Dodge Magnet Wire Company  
Address City IN Zip: 4300 New Haven Avenue  
Permit Number: 003-12801-00013  
Plt ID: 003-00013  
Reviewer: ERG/RM  
Date: 10-24-00

Potential Emissions (prior to internal integral catalytic oxidizer):																	
Material	Density (Lb/GAL)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	
Polyester 97-72-680	9.51	67.00%	0.00%	67.00%	0.00%	33.00%	0.0019	244	6.37	6.37	2.95	70.89	12.94	0.00	19.31	100.00%	
Polyamide Imide Enamel 97-61-639	8.85	74.00%	0.00%	74.00%	0.00%	26.00%	0.00056	244	6.55	6.55	0.89	21.48	3.92	0.00	25.19	100.00%	
Bondable Enamel 97-60-681	8.68	97.00%	0.00%	97.00%	0.00%	30.00%	0.0019	244	8.42	8.42	3.90	93.68	17.10	0.00	28.07	100.00%	
Worst Case Potential to Emit prior to internal integral catalytic oxidizer:											3.90	93.68	17.10	0.00			
Potential Emissions (after internal integral catalytic oxidizer):																	
									Material (As Applied)	Applicant listed VOC Control Efficiency	Controlled VOC lbs per hour	Controlled VOC lbs per day	Controlled VOC tons per year				
									Polyester 97-72-680	95.00%	0.15	3.54	0.65				
									Polyamide Imide Enamel 97-61-639	95.00%	0.04	1.07	0.20				
									Bondable Enamel 97-60-681	95.00%	0.20	4.68	0.85				
									Worst Case Potential to Emit after internal integral catalytic oxidizer:								

## Methodology:

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1 - Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

Potential VOC pounds per hour = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC pounds per day = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* 24 hr/day

Potential VOC tons per year = Pounds VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* 8760 hr/yr \* (1 ton/2000 lb)

Particulate Potential Tons per Year = (units/hr) \* (gal/unit) \* (lbs/gal) \* (1 - Weight % Volatiles) \* (1 - Transfer Efficiency) \* (8760 hr/yr) \* (1 ton/2000 lb)

Pounds VOC per Gallon of solids = (Density (lb/gal) \* Weight % organics) / (Volume % Solids) \* Transfer Efficiency

Controlled emission rate = worst case uncontrolled emission rate \* (1 - control efficiency)

HAP Emissions  
 From Surface Coating Operations  
 Emission Unit 650  
 Company Name: Phelps Dodge Magnet Wire Company  
 Address City IN Zip: 4300 New Haven Avenue  
 Permit Number: 003-12801-00013  
 Plt ID: 003-00013  
 Reviewer: ERG/RM  
 Date: 10-24-00

Uncontrolled Potential Emissions												
Material	Density (Lb/GAL)	Gal of Mat (gal/unit)	Maximum (units/hr)	Weight % Xylenes (isomers & mixtures)	Weight % Cumene	Weight % Phenol	Weight % Cresols/Cresylic Acid	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Polyimide Enamel 97-68-099	8.51	0.035	444	0.18%	0.18%	0.00%	0.00%	1.04	1.04	0.00	0.00	2.09
Formvar Enamel 97-64-635	8.2	0.035	444	20.27%	0.27%	25.00%	18.00%	113.13	1.51	139.53	100.46	354.64
Polyester Enamel 97-72-607	8.8	0.035	444	0.00%	0.00%	0.00%	50.00%	0.00	0.00	0.00	299.49	299.49
Amide-Imide Enamel 97-61-539	8.51	0.035	444	0.30%	0.30%	0.00%	0.00%	1.74	1.74	0.00	0.00	3.48
Worst Case Uncontrolled Potential to Emit:								113.13	1.51	139.53	100.46	354.64
Controlled Potential Emissions												
				Material (As Applied)		Destruction Efficiency (%)	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)	
				Polyimide Enamel 97-68-099		98.00%	0.02	0.02	0.00	0.00	0.04	
				Formvar Enamel 97-64-635		98.00%	2.26	0.03	2.79	2.01	7.09	
				Polyester Enamel 97-72-607		98.00%	0.00	0.00	0.00	5.99	5.99	
				Amide-Imide Enamel 97-61-539		98.00%	0.03	0.03	0.00	0.00	0.07	
Worst Case Controlled Potential To Emit:								2.26	0.03	2.79	2.01	7.09

## Methodology:

HAPs emission rate (ton/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hr/yr \* 1ton/2000 lb

## HAP Emissions

From Surface Coating Operations

Emission Unit 310

Company Name: Phelps Dodge Magnet Wire Company

Address City IN Zip: 4300 New Haven Avenue

Permit Number: 003-12801-00013

Plt ID: 003-00013

Reviewer: ERG/RM

Date: 10-24-00

Uncontrolled Potential Emissions												
Material	Density (Lb/GAL)	Gal of Mat. (gal/unit)	Maximum (unit/hr)	Weight % Xylenes (isomers & mixtures)	Weight % Cumene	Weight % Phenol	Weight % Cresols/Cresylic Acid	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Formvar C 97-64-360	8.48	0.018	366	1.45%	0.58%	36.00%	12.00%	3.54	1.42	87.85	29.28	122.09
Worst Case Uncontrolled Potential to Emit:								3.54	1.42	87.85	29.28	122.09
Controlled Potential Emissions												
				Material (As Applied)		Destruction Efficiency (%)	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)	
				Formvar C 97-64-360		98.00%	0.07	0.03	1.76	0.59	2.44	
				Worst Case Controlled Potential To Emit:								0.07

## Methodology:

HAPs emission rate (ton/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hr/yr \* 1ton/2000 lb

## HAP Emissions

From Surface Coating Operations

Emission Unit 1071

Company Name: Phelps Dodge Magnet Wire Company

Address City IN Zip: 4300 New Haven Avenue

Permit Number: 003-12801-00013

Plt ID: 003-00013

Reviewer: ERG/RM

Date: 10-24-00

*Potential Emissions (prior to internal integral catalytic oxidizer):*

Material	Density (Lb/GAL)	Gal of Mat (gal/unit)	Maximum (units/hr)	Weight % Xylenes (isomers & mixtures)	Weight % Cumene	Weight % Phenol	Weight % Cresols/Cresylic Acid	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Polyester 97-72-680	9.51	0.0019	244	0.20%	0.20%	26.00%	21.00%	0.04	0.04	5.02	4.06	9.15
Polyamide Imide Enamel 97-61-639	8.85	0.00056	244	0.22%	0.22%	0.00%	0.00%	0.01	0.01	0.00	0.00	0.02
Bondable Enamel 97-60-681	8.68	0.0019	244	0.27%	0.27%	35.00%	35.00%	0.05	0.05	6.17	6.17	12.43

**Worst Case Potential to Emit prior to internal integral catalytic oxidizer:**

0.05	0.05	6.17	6.17	12.43
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*Potential Emissions (after internal integral catalytic oxidizer):*

	Material (As Applied)	Destruction Efficiency (%)	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
	Polyester 97-72-680	95.00%	0.00	0.00	0.25	0.20	0.46
	Polyamide Imide Enamel 97-61-639	95.00%	0.00	0.00	0.00	0.00	0.00
	Bondable Enamel 97-60-681	95.00%	0.00	0.00	0.31	0.31	0.62
<b>Worst Case Potential to Emit after internal integral catalytic oxidizer:</b>			0.00	0.00	0.31	0.31	0.62

## Methodology:

$$\text{HAPs emission rate (ton/yr)} = \text{Density (lb/gal)} * \text{Gal of Material (gal/unit)} * \text{Maximum (unit/hr)} * \text{Weight \% HAP} * 8760 \text{ hr/yr} * 1 \text{ ton/2000 lb}$$

# Appendix A: Emission Calculations

Natural Gas Combustion Only

MM Btu/hr < 100

Natural Gas Emergency Generator

Company Name: Phleps Dodge Magnet Wire Company

Address City IN Zip: 4300 New Haven Avenue

Permit Number: 003-12801-00013

Plt ID: 003-00013

Reviewer: ERG/RM

Date: 10-24-00

Heat Input Capacity  
1.1 MMBtu/hr

Potential Throughput  
9.636 MMCF/yr

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emissions in ton/yr	0.04	0.04	0.00	0.48	0.03	0.40

\*Emission factor is filterable and condensable PM/PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

## Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton



# Appendix A: Emission Calculations

Natural Gas Combustion Only

MM Btu/hr < 100

Natural Gas Emergency Generator

Company Name: Phleps Dodge Magnet Wire Company

Address City IN Zip: 4300 New Haven Avenue

Permit Number: 003-12801-00013

Plt ID: 003-00013

Reviewer: ERG/RM

Date: 10-24-00

Heat Input Capacity

1.1 MMBtu/hr

Potential Throughput

9.636 MMCF/yr

## HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.012E-05	5.782E-06	3.614E-04	8.672E-03	1.638E-05

## HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.409E-06	5.300E-06	6.745E-06	1.831E-06	1.012E-05

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.